

NEW NAMES IN AMERICAN ACACIAS

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Abstract. The new combination, Acacia minuta, is proposed with an expanded description for Arizonan and Californian populations. A. minuta ssp. densiflora is proposed for eastern United States populations.

For many decades, several populations of acacia in California and Baja California have been assigned to A. farnesiana (Linnaeus) Willdenow (McMinn, 1939; Benson & Darrow, 1944; Munz, 1959). However, Isely (1969, 1973) has noted the distinctiveness of these as well as other United States populations from A. farnesiana, for which he proposed the name A. smallii.

The acacia populations from the coastal regions of the Californias are immediately separable from A. farnesiana in that the Californian populations have a single row of seeds within the legume, while A. farnesiana has two rows. This double row is used to characterize the genus Vachellia Wight & Arnott and, therefore, A. farnesiana (Vachellia f. (L.) Wight & Arn.) (Wight & Arnott, 1834).

The eastern United States populations of this distinctive acacia differ from the Californian populations chiefly by the glabrate leaflets and shorter (3-8 cm) legumes. Populations of this acacia from the Baboquivari Mountains of Arizona are aligned taxonomically with the California material (Isely, 1973) based on foliar pubescence; however they are intermediate by virtue of shorter legume length.

The type specimen of Pithecollobium minutum Jones (1933) was found among the herbarium specimens examined to determine the extent of geographic range and morphological diversity of A. smallii. This specimen is well within the morphological range of the material ascribed to A. smallii by Isely. P. minutum appears to have priority over A. smallii Isely and is still available within Acacia for the taxon. The other available name, Vachellia densiflora Alexander ex Small, is pre-occupied in Acacia by A. densiflora Morrison (1912).

Acacia minuta (M.E. Jones) Beauchamp comb. nov., based upon Pithecollobium minutum M.E. Jones, Contr. Western Bot.

18:38, August 1933. Cacachilla Mountains, 20 miles south of La Paz (Morton, 1945) Baja California Sur, Mexico, M.E. Jones 27265 (POM, holotype).

Additional specimens examined: Mexico: Baja California Norte: San Telmo, Harbison & Higgins, 1953 (POM); $\frac{1}{2}$ mi W of San Telmo, 500 ft. alt., Benson 14329 (POM); Santa Gertrudis, Harbison, 1953 (POM); by stream between Santo Tomas Valley and San Vicente, Ferris 8508 (POM, NY); Las Juncas Rancho, Harbison, 1940 (POM, SD); Calmalli, Epling & Robison, 1935 (POM); spring above the village Bahia de Los Angeles, Moran 12414 (RSA, SD). Baja California Sur: San Jose del Cabo, Jones 24012 (POM, SD); 3 mi. upstream Arroyo San Lazero, Cape Region, Thomas 7769 (SD). UNITED STATES: California: San Diego County: San Dieguito Valley, $4\frac{1}{2}$ mi. E of Del Mar, Gander 675 (SD); Federal Boulevard, near Emerald Hills Club House, Gander 113.2 (SD); near Radio Station (Chollas Heights), Higgins, 1952 (POM); on the road to Tijuana, Wolf 2094 (POM); S. of Otay. Roos 2560 (POM).

Because of the minimal description given by Jones (1933), an expanded description as well as an illustration of the San Diego County material (Figure 1) are given.

A usually inconspicuous shrub to 6 m tall; branches weakly zig-zag, well-armed with a pair of white stipular spines 4-55 mm long at each node; leaves alternate or clustered from multistipulate spurs, bipinnate, rachis 18-36 mm long, winged, ending in a weak mucro, puberulent; pinnae 3-5 pairs, 4-24 mm long; leaflets 11-17 pairs, elliptic-oblong, 2-5.5 mm long, asymmetrically attached to the rachis, puberulent, becoming glabrous with age; inflorescence spherically capitulate, 40-70 flowers, golden-yellow to dull orange in age, fragrant, 6-9 mm in diameter (pressed), 1-6 per node; peduncles 13-18 mm, maturing to 24-30 mm long and 10-15 mm in diameter, ebracteate, hirsutulous and becoming glabrous at maturity; corolla 5-lobed, 2 mm long, each lobe green and pubescent; filaments yellow, about 36 in number; legume with 10 mm long stipe, turgid, linear-acuminate curved to sickle-shaped, 7-15 (18.5) cm long, 13 mm in diameter, up to 14 per infructescence, tardily dehiscent by a conspicuous white, double-ridged suture; valves weakly constricted between the single row of 13-15 seeds, pithy, becoming dark brown to black at maturity. Seeds 7 mm long, depressed-ovate, brown with encircling black ridges on the depressed surfaces. Flowering generally from October to April but largely dependent on rainfall.

The apparent priority of Pithecollobium minutum and segregation of western populations within A. minuta also necessi-

tates a change in the nomenclature of the eastern United States populations which most recently had been designated as Acacia smallii Isely (1969, 1973).

Acacia minuta (Jones) Beauchamp ssp. densiflora (Alexander ex Small) Beauchamp, stat. et comb. nov. based upon Vachellia densiflora Alexander ex Small, Man. Se. Flora 655 & 1505. 1933. Synonyms: Acacia densiflora (Alexander) Corey, Rhodora 38-406. 1946 non A. densiflora Morrison (1912); A. smallii Isely, Sida 3(6): 384. 1969.

A. minuta ssp. minuta is now found only as relictual populations (Isely 1973), possibly as remnants of a former arid subtropic scrub plant community (Axelrod, 1958). The San Diego County, as well as several Baja Californian populations, are widely separated and occur in low-lying coastal areas which are generally frost-free.

The roots of this Californian subspecies in cultivation emit a pungent, onion-like odor when disturbed. This same odor is found in the germinating seeds and seedlings. The plants are self-fertile as evidenced by fertile seeds produced by isolated shrubs.

The fruits of all populations observed in San Diego County are infested with a Bruchid beetle and seed predation appears to be heavy, about 80% on dispersed seeds. The surface of the legumes and seeds are often covered with eggs of the beetles, giving a slightly speckled appearance.

Because of their occurrence on the coastal plain about San Diego, the three known California populations of Acacia minuta are seriously threatened with eradication by urbanization.

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Acknowledgements

Much of the initial research on this acacia was carried on by Mr. Charles F. Harbison, regional naturalist and Curator Emeritus of Entomology, San Diego Natural History Museum, who pointed out the distinctiveness of these native Californian acacia populations from cultivated specimens of A. farnesiana. Conversations with Dr. Duane Isely, while on his sabbatical leave at the New York Botanical Garden in 1974 also encouraged further investigation into the regional extent of the populations, especially into Baja California. Dr. Reid V. Moran aided with his critical review of initial drafts of this paper as well as information on the status of populations of the acacia in Baja California.

Nomenclature adjustments made here are necessarily local in scope. Much research remains to resolve the complex of variations in the acacias associated with A. farnesiana.



Figure 1. *Acacia minuta* ssp. *minuta*. A-flowering branch; B-inflorescence at anthesis; C-inflorescence in bud; D-single leaf; E-single seed (bar equals 1 cm); F-single legume (bar equals 1 cm); G-longitudinal cross-section of legume showing single row of seeds; H-habit of plant, 3 meters high.